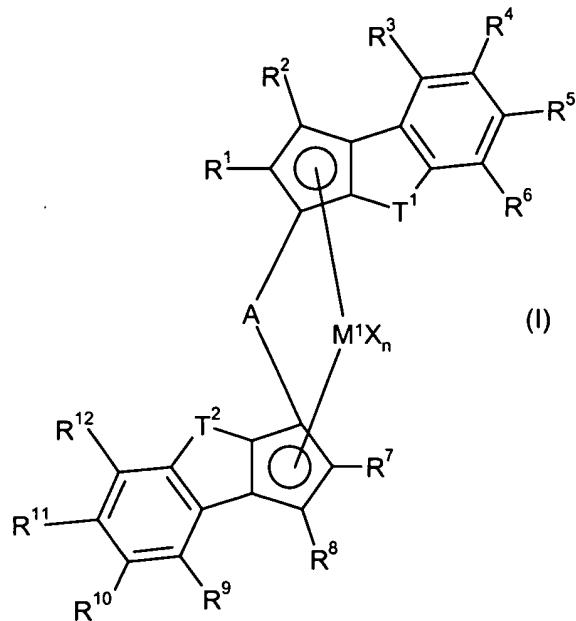


**AMENDMENTS TO THE CLAIMS**

1. (Original) An organometallic transition metal compound of the formula (I)



where

M<sup>1</sup> is a metal of group 3, 4, 5 or 6 of the Periodic Table of the Elements or the lanthanides,

X are identical or different and are each an organic or inorganic radical, where two radicals X can also be joined to one another,

n is a natural number from 1 to 4,

T<sup>1</sup>, T<sup>2</sup> are identical or different and are each a divalent group selected from the group consisting of -O-, -S-, -Se-, -Te-, -N(R<sup>13</sup>)-, -P(R<sup>13</sup>)-, -As(R<sup>13</sup>)-, -Sb(R<sup>13</sup>)-, -Si(R<sup>13</sup>)₂-, -C(R<sup>13</sup>R<sup>14</sup>)-C(R<sup>13</sup>R<sup>15</sup>)- and -C(R<sup>14</sup>)=C(R<sup>15</sup>)-, where R<sup>13</sup>, R<sup>14</sup> and R<sup>15</sup> are identical or different and are each hydrogen or an organic radical having from 1 to 40 carbon atoms,

R<sup>1</sup>, R<sup>7</sup> are identical or different and are each hydrogen or an organic radical having from 1 to 40 carbon atoms,

R<sup>2</sup>, R<sup>8</sup> are identical or different and are each hydrogen or an organic radical having from 1 to 40 carbon atoms,

R<sup>3</sup>, R<sup>9</sup> are identical or different and are each halogen or an organic radical having from 1 to 40 carbon atoms, where R<sup>3</sup> is not methyl when T<sup>1</sup> is -C(H)=C(H)-,

R<sup>4</sup>, R<sup>5</sup>, R<sup>6</sup>, R<sup>10</sup>, R<sup>11</sup> and R<sup>12</sup> are identical or different and are each hydrogen, halogen or an organic radical having from 1 to 40 carbon atoms, or two adjacent radicals R<sup>4</sup>, R<sup>5</sup>, R<sup>6</sup>, R<sup>10</sup>, R<sup>11</sup> and R<sup>12</sup> together with the atoms connecting them form a monocyclic or polycyclic, substituted or unsubstituted ring system which has from 1 to 40 carbon atoms and may also contain heteroatoms selected from the group consisting of the elements O, S, Se, Te, N, P, As, Sb and Si,

or,

if T<sup>1</sup> or T<sup>2</sup> is -O-, -S-, -Se- or -Te-, the radical R<sup>3</sup> together with R<sup>4</sup> and/or the radical R<sup>9</sup> together with R<sup>10</sup> forms a monocyclic or polycyclic, substituted or unsubstituted ring system which has from 1 to 40 carbon atoms and may also contain heteroatoms selected from the group consisting of the elements O, S, Se, Te, N, P, As, Sb and Si,

and

A is a bridge consisting of a divalent atom or a divalent group.

2. (Original) An organometallic transition metal compound of the formula (I) as claimed in claim 1,

wherein

M<sup>1</sup> is an element of group 4 of the Periodic Table of the Elements,

n is 2,

T<sup>1</sup>, T<sup>2</sup> are identical and are each -O-, -S-, -Se- or -Te-,

R<sup>1</sup>, R<sup>7</sup> are identical and are each a C<sub>1</sub>-C<sub>10</sub>-alkyl radical,

R<sup>2</sup>, R<sup>8</sup> are identical and are each hydrogen,

R<sup>3</sup>, R<sup>9</sup> are identical or different and are each a substituted or unsubstituted C<sub>6</sub>-C<sub>40</sub>-aryl radical or C<sub>2</sub>-C<sub>40</sub>-heteroaromatic radical containing at least one heteroatom selected from the group consisting of O, N, S and P,

R<sup>4</sup>, R<sup>5</sup>, R<sup>10</sup> and R<sup>11</sup> are identical and are each hydrogen,

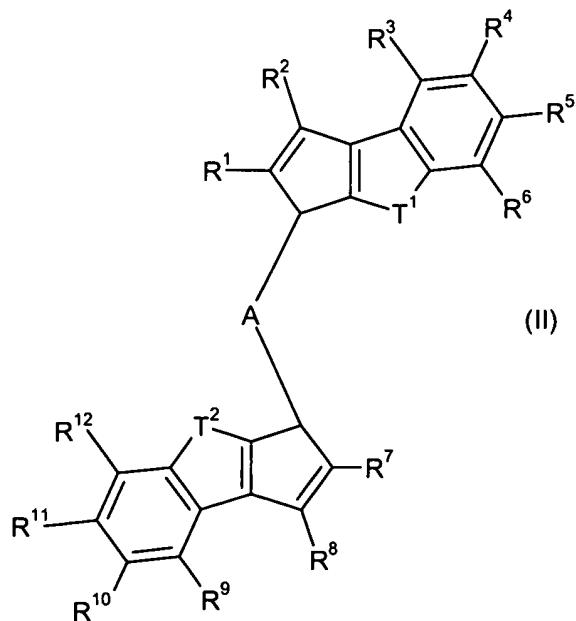
R<sup>6</sup>, R<sup>12</sup> are identical and are each hydrogen or an organic radical having from 1 to 20 carbon atoms,

A is a substituted silylene group or a substituted or unsubstituted ethylene group,

and

the other variables are as defined in claim 1.

3. (Currently amended) A biscyclopentadienyl ligand system of the formula (II)



or one of its double bond isomers,

where the variables  $R^1, R^2, R^3, R^4, R^5, R^6, R^7, R^8, R^9, R^{10}, R^{11}, R^{12}, T^1, T^2$  and  $A$  are as defined in formula (I)

$T^1$  and  $T^2$  are identical or different and are each a divalent group selected from the group consisting of -O-, -S-, -Se-, -Te-, -N( $R^{13}$ )-, -P( $R^{13}$ )-, -As( $R^{13}$ )-, -Sb( $R^{13}$ )-, -Si( $R^{13}$ )<sub>2</sub>-, -C( $R^{13}R^{14}$ )-C( $R^{13}R^{15}$ )- and -C( $R^{14}$ )=C( $R^{15}$ )-, where  $R^{13}$ ,  $R^{14}$  and  $R^{15}$  are identical or different and are each hydrogen or an organic radical having from 1 to 40 carbon atoms,

$R^1$  and  $R^7$  are identical or different and are each hydrogen or an organic radical having from 1 to 40 carbon atoms,

$R^2$  and  $R^8$  are identical or different and are each hydrogen or an organic radical having from 1 to 40 carbon atoms,

$R^3$  and  $R^9$  are identical or different and are each halogen or an organic radical having from 1 to 40 carbon atoms, where  $R^3$  is not methyl when  $T^1$  is -C(H)=C(H)-,

$R^4, R^5, R^6, R^{10}, R^{11}$  and  $R^{12}$  are identical or different and are each hydrogen, halogen or an organic radical having from 1 to 40 carbon atoms, or two adjacent radicals  $R^4, R^5, R^6, R^{10}, R^{11}$  and  $R^{12}$  together with the atoms connecting them form a monocyclic or polycyclic, substituted or unsubstituted ring system which has from 1 to 40 carbon atoms and may also contain heteroatoms selected from the group consisting of the elements O, S, Se, Te, N, P, As, Sb and Si,

or,

if  $T^1$  or  $T^2$  is -O-, -S-, -Se- or -Te-, the radical  $R^3$  together with  $R^4$  and/or the radical  $R^9$  together with  $R^{10}$  forms a monocyclic or polycyclic, substituted or unsubstituted ring system which has from 1 to 40 carbon atoms and may also contain heteroatoms selected from the group consisting of the elements O, S, Se, Te, N, P, As, Sb and Si,

and

$A$  is a bridge consisting of a divalent atom or a divalent group.

4. (Original) A biscyclopentadienyl ligand system of the formula (II) as claimed in claim 3,

wherein

$T^1, T^2$  are identical and are each -O-, -S-, -Se- or -Te-,

$R^1, R^7$  are identical and are each a  $C_1-C_{10}$ -alkyl radical,

$R^2, R^8$  are identical and are each hydrogen,

$R^3, R^9$  are identical or different and are each a substituted or unsubstituted  $C_6-C_{40}$ -aryl radical or  $C_2-C_{40}$ -heteroaromatic radical containing at least one heteroatom selected from the group consisting of O, N, S and P,

$R^4, R^5$ ,         $R^{10}$  and  $R^{11}$  are identical and are each hydrogen,

$R^6, R^{12}$  are identical and are each hydrogen or an organic radical having from 1 to 20 carbon atoms,

and

A is a substituted silylene group or a substituted or unsubstituted ethylene group.

5. (Currently amended) A catalyst system for the polymerization of olefins comprising at least one organometallic transition metal compound as claimed in claim 1 [or 2] and at least one cocatalyst which is able to convert the organometallic transition metal compound into a species which displays polymerization activity toward at least one olefin.

6. (Original) A catalyst system as claimed in claim 5 which further comprises a support.

7. (Currently amended) A process for preparing polyolefins by polymerization or copolymerization of at least one olefin in the presence of a catalyst system as claimed in claim 5 [or 6].
8. cancelled
9. (Currently amended) A process for preparing an organometallic transition metal compound, which comprises reacting a reacting the biscyclopentadienyl ligand system as claimed in claim 3 [or 4] or a bisanion prepared therefrom with a transition metal compound.
10. (Original) A polyolefin obtainable by the process as claimed in claim 7.
11. (New) A catalyst system for the polymerization of olefins comprising at least one organometallic transition metal compound as claimed in claim 2 and at least one cocatalyst which is able to convert the organometallic transition metal compound into a species which displays polymerization activity toward at least one olefin.
12. (New) A catalyst system as claimed in claim 11 which further comprises a support.
13. (New) A process for preparing polyolefins by polymerization or copolymerization of at least one olefin in the presence of a catalyst system as claimed in claim 11.
14. (New) A process for preparing polyolefins by polymerization or copolymerization of at least one olefin in the presence of a catalyst system as claimed in claim 12.
15. (New) A process for preparing polyolefins by polymerization or copolymerization of at least one olefin in the presence of a catalyst system as claimed in claim 6.
16. (New) A process for preparing an organometallic transition metal compound, which comprises reacting the biscyclopentadienyl ligand system as claimed in claim 4 or a bisanion prepared therefrom with a transition metal compound.